

Notice of Allowability

Application No.

10/654,403

Examiner

Toan Ton

Applicant(s)

OGISHIMA ET AL.

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to _____.
2. ☒ The allowed claim(s) is/are 1-14.
3. ☒ The drawings filed on 09-04-03 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

REASONS FOR ALLOWANCE

1. Claims 1-14 are allowed.

The following is an examiner's statement of reasons for allowance: the prior art of record does not anticipate nor render obvious to one ordinary skilled in the art a liquid crystal display device comprising a combination of various elements as claimed, more specifically, the liquid crystal display device having a defined value for d/p between $0.0021(V_{\max})^2 - 0.0458(V_{\max}) + 0.65$ and $0.0021(V_{\max})^2 - 0.0458(V_{\max}) + 0.50$, and said liquid crystal display device having a defined value for $d \cdot \Delta n / \lambda$ between $-0.00026(V_{\max})^3 + 0.016(V_{\max})^2 - 0.2281(V_{\max}) + 2.124$ and $-0.00026(V_{\max})^3 + 0.016(V_{\max})^2 - 0.2281(V_{\max}) + 1.7603$, where d/p is a ratio of a thickness d of the liquid crystal layer to a natural twist pitch p of a liquid crystal, V_{\max} [V] is a maximum applied effective voltage across the first electrode and the second electrode, and Δn is a refractive anisotropy of the liquid crystal layer.

Raynes ('753) discloses a liquid crystal display device comprising a particular relationship between a total retardance and operating voltages, however, Raynes fails to disclose/suggest particular parameters and relationships as recited in claim 1 above.

Plach ('798) discloses a liquid crystal display device comprising particular parameters of the $\Delta n \cdot d$ and d/p , however, Plach fails to disclose/suggest particular parameters and relationships as recited in claim 1 above.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

CONCLUSION

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

CONTACT INFORMATION

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan Ton whose telephone number is (571) 272-2303.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

July 9, 2004


TOANTON
PRIMARY EXAMINER